

THE VALUE OF UNIQUE DEVICE IDENTIFIERS IN ORTHOPEDIC SURGERY

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UDI IN ORTHOPEDICS

Introduction

Orthopedic Patients Receive
Many Implantable Devices:

- Examples:
 - total joint replacement
 - fracture fixation devices
 - spine instrumentation



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Introduction

- We need a standardized unique device identifier in orthopedic surgery
- A world wide standard would be best



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Introduction

Value of a UDI:

- To individual patient (and his/her surgeon)
- To patients collectively: facilitates systematic implant tracking (registries)

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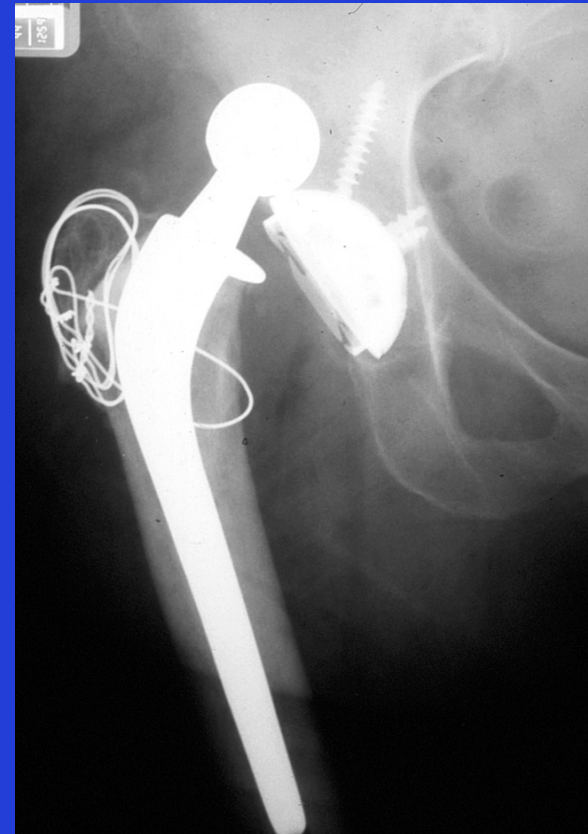


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Individual Patient

What Implant is in a Patient?

- The surgeon needs to know
- It helps the patient
- Right now is often difficult to find out



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Individual Patient

What Implant is in a Patient?

- Ambiguous hospital records and operative reports
- Ambiguous or incomplete implant naming

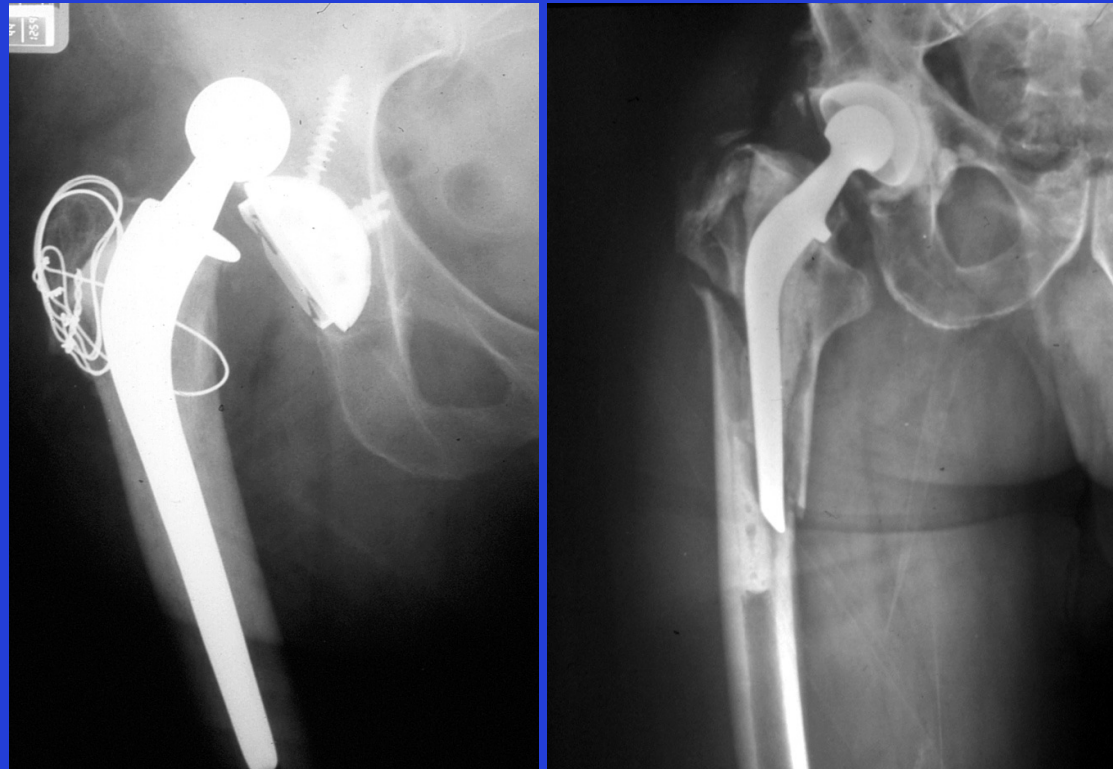


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Individual Patient

Value of UDI:

- Implant removal
- Implant compatibility



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Example

66 yo man with
instability after
total knee
replacement:

- Implant revision
required



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Example

Value of UDI:

- Allows surgeon to know what instruments needed for implant removal

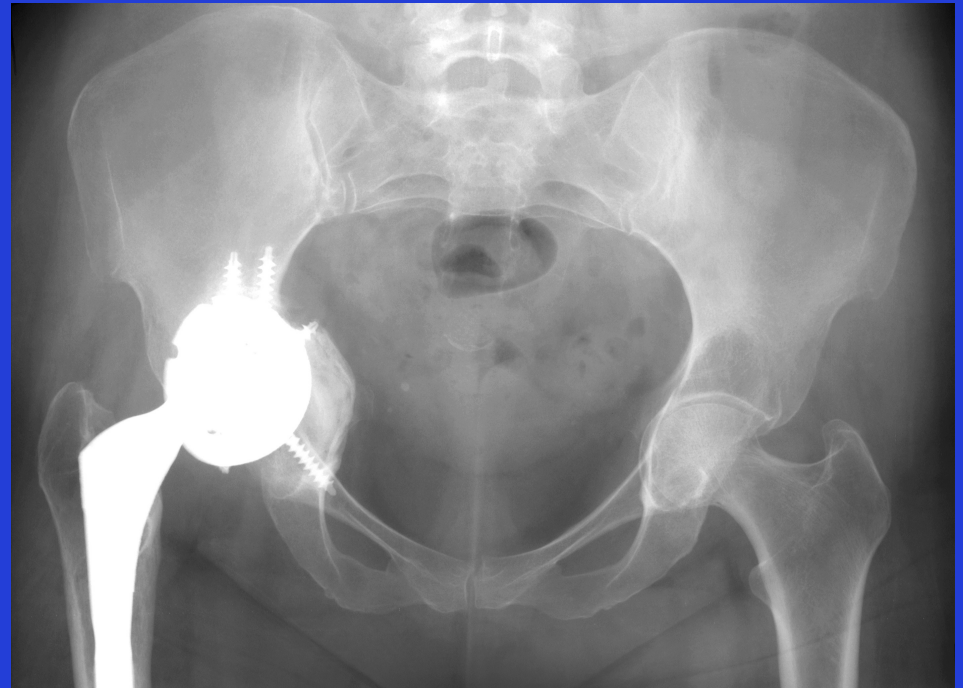


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Example

55 yo woman
with with
failed hip
replacement:

- Socket
revision
required



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Example

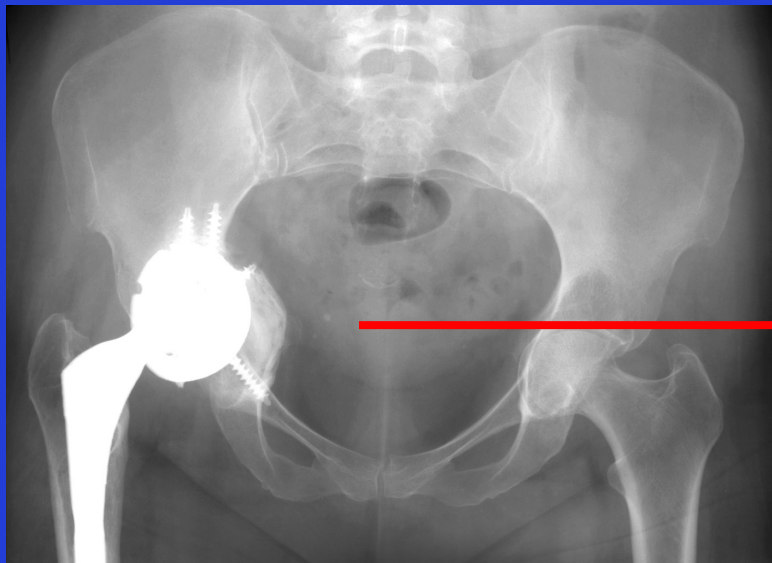
- Which implants are present?
- Manufacturer
- Exact model
- Implant sizes



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Example

- Implant compatibility



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Systematic Following of Implants

Value of UDI to individual patients:

- A UDI also will help alert patients if a recall occurs



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Introduction

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Systematic Following of Implants

Implant Registries:

- Follow outcome of implants in large populations
- Successful models for joint replacement – Scandinavia, Australia
- Goal:
 - trip-wire for problem implants
 - improve all results

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Systematic Following of Implants

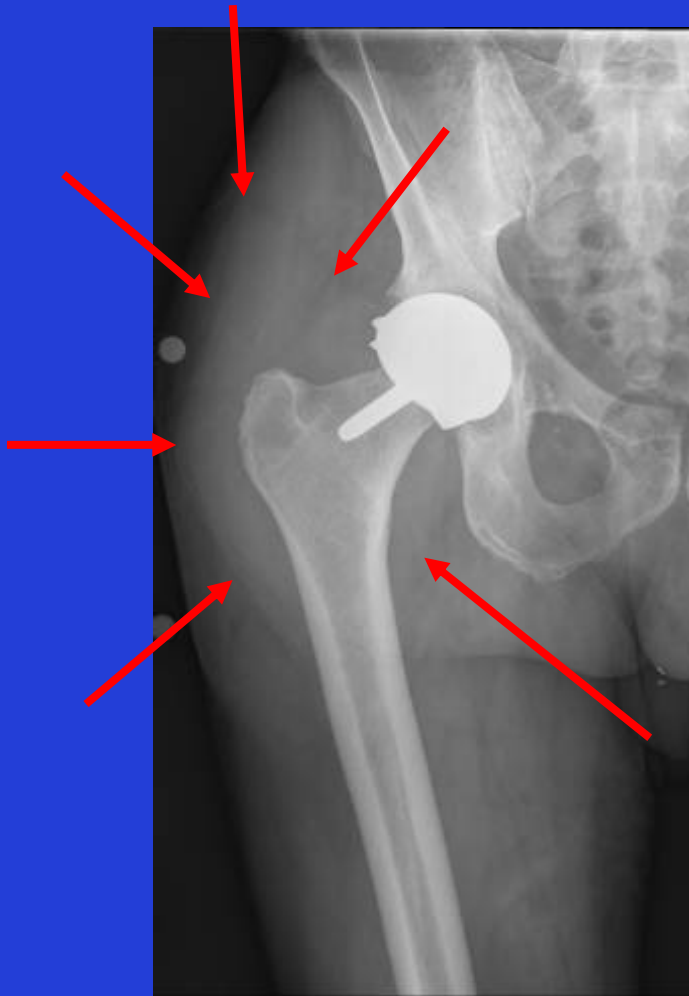
Implant Registries:

- Goal: trip-wire for problem implants



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Implant Registries

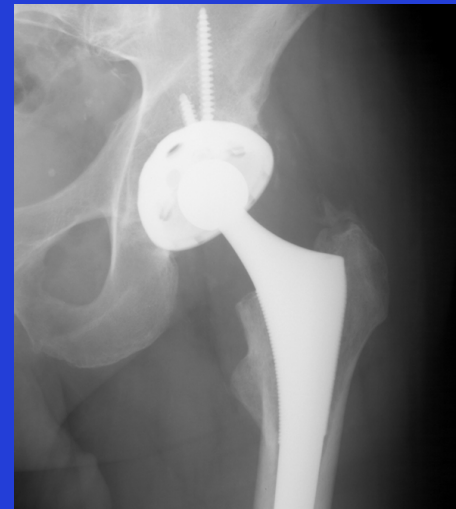


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Systematic Following of Implants

Implant Registries:

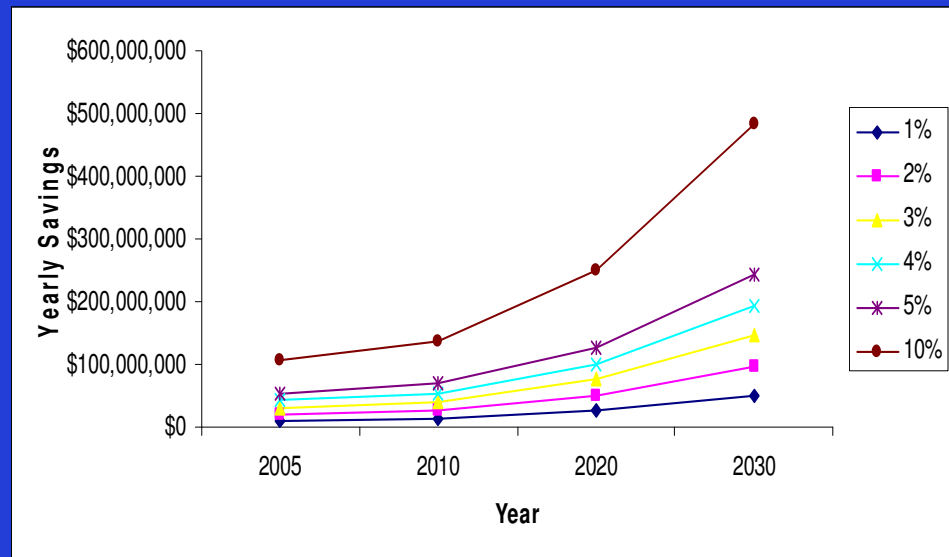
- Goal: improve care of all patients
 - better implants
 - better surgery
 - less cost



UDI IN ORTHOPEDICS Implant Registries

American Joint Replacement Registry:

- Huge potential cost savings

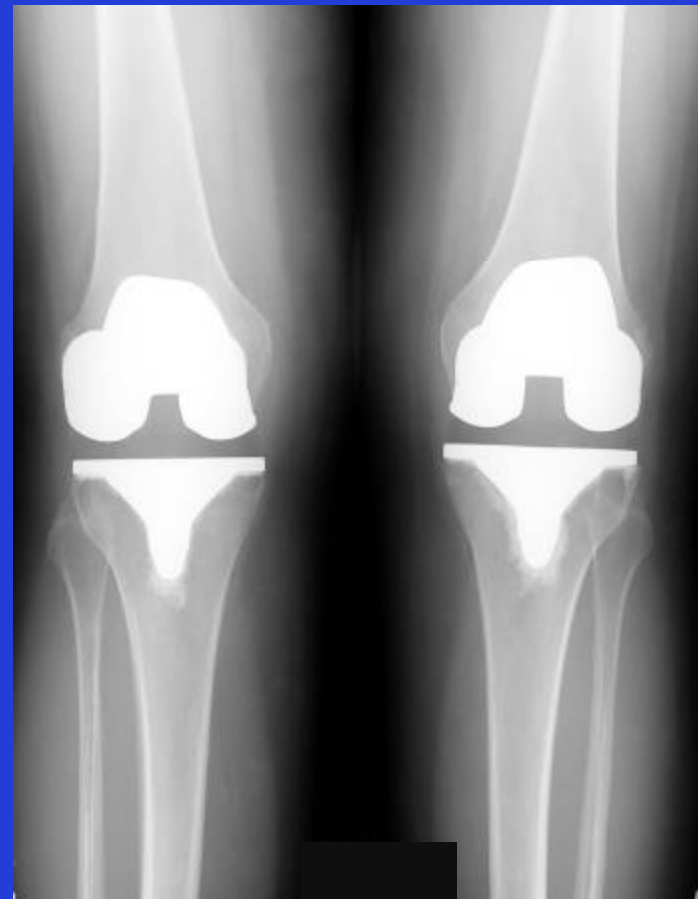


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Implant Registries

Value of UDI:

- Unambiguous tracking of every implant

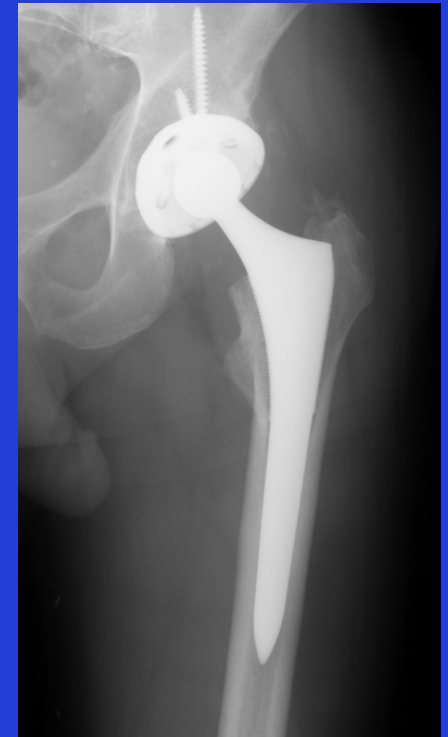
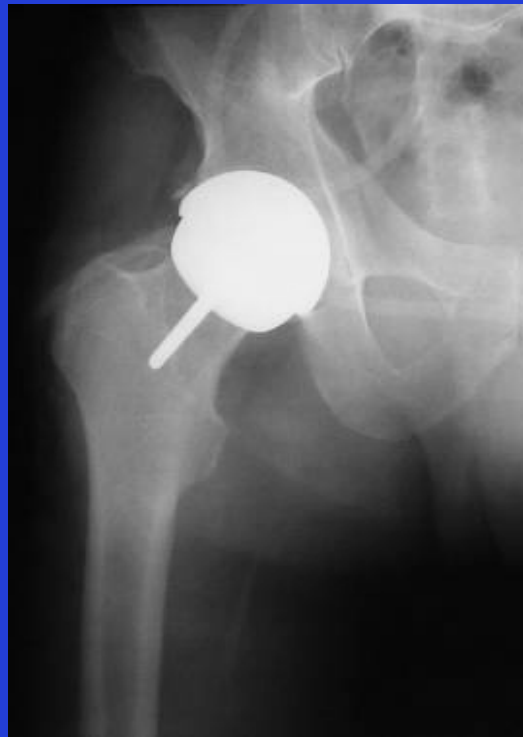


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Implant Registries

Value of UDI:
Registry can
track:

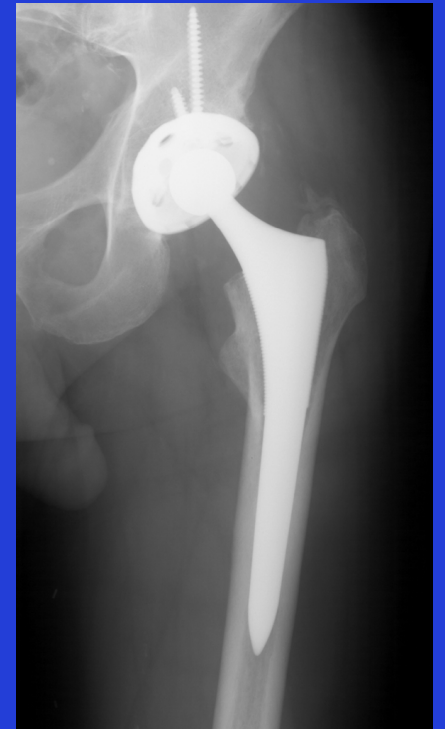
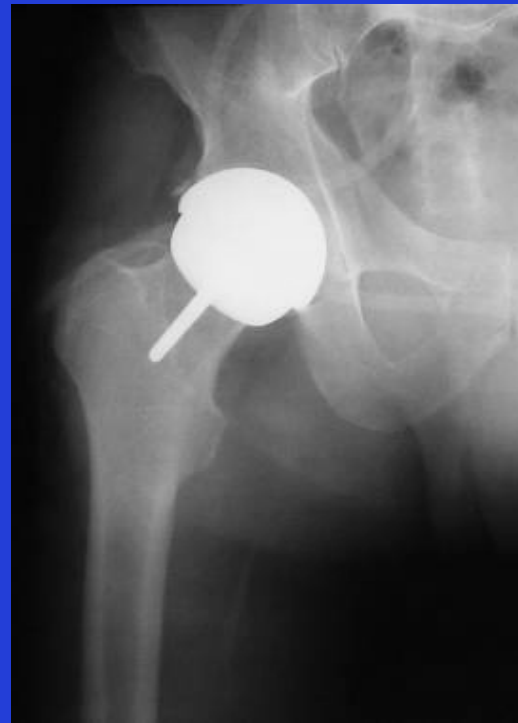
- Implant In
- Implant Out



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Case Example

- Is hip resurfacing as good or better than conventional hip replacement?

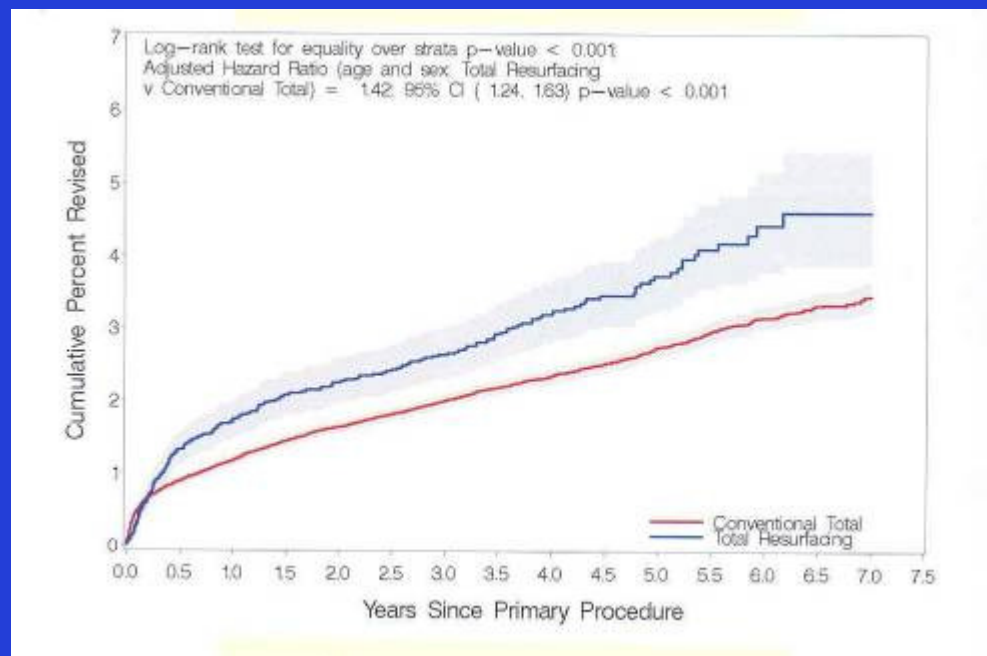


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Implant Registries

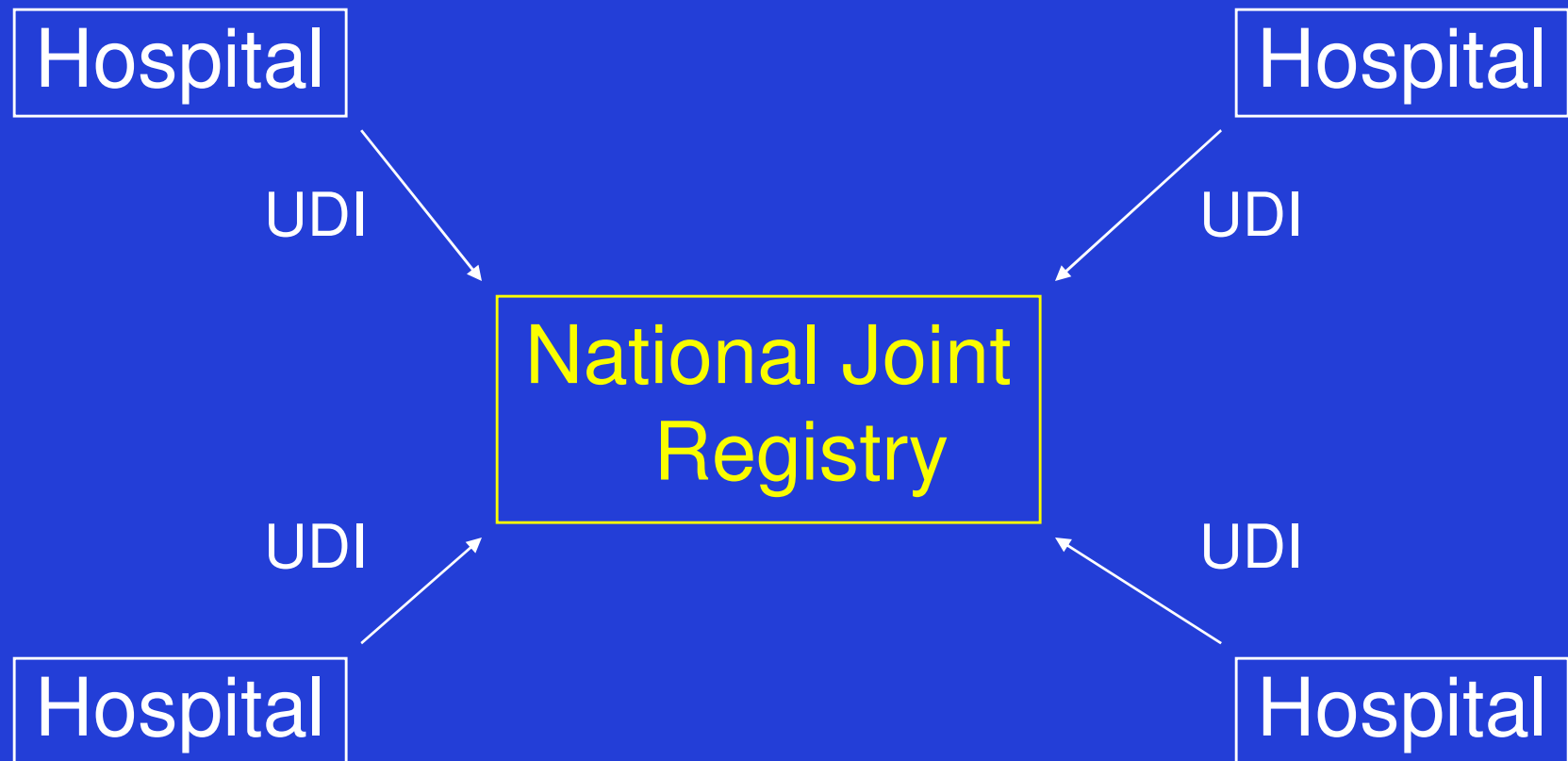
Registry with UDI:

- Implant performance



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Implant Registries



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Implant Registries

Value of UDI:

- Rapid, cost effective entry of data from point of care.....
- Into key databases (example: National Joint Registry)



50 yo woman:
Dislocated hip since birth



UDI: did this method work?
UDI: Compatible implants for
future surgeries

